

IN THE CLAIMS:

Please CANCEL claims 29-42 and AMEND claims 1, 9, 19, 20 and 43 in accordance with the following:

1. (currently amended) A date-and-time management apparatus capable of inputting a date-and-time setting request from each of a plurality of date-and-time managers, comprising:

a date-and-time setting request reception unit accepting a date-and-time setting request from any date-and-time manager before accepting a date-and-time setting request from a predetermined date-and-time manager, and accepting a date-and-time setting request only from the predetermined date-and-time manager after accepting a date-and-time setting request from the predetermined date-and-time manager; and

a clock unit functioning in response to the accepted date-and-time setting request setting date and time in accordance with the date-and-time setting request most recently accepted by said date-and-time setting request reception unit and indicating official valid date-and-time information or date-and-time information with validity which complies with official valid date-and-time information after the date and time of said clock unit is set in accordance with the date-and-time setting request from the predetermined date-and-time manager.

2. (previously presented) A date-and-time management apparatus capable of inputting a date-and-time setting request from each of a plurality of date-and-time managers in a hierarchical structure, comprising:

a date-and-time setting request reception unit accepting a date-and-time setting request from any date-and-time manager in the plurality of date-and-time managers, and then accepting a date-and-time setting request only from a date-and-time manager at a higher hierarchical level than the date-and-time manager whose request has been accepted before; and

a clock unit functioning in response to the accepted date-and-time setting request.

3. (previously amended) The apparatus according to claim 1,

further comprising a date-and-time management device for each date-and-time manager,

and

wherein said date-and-time management device for each date-and-time manager comprises a date-and-time setting request unit for issuing to said date-and-time setting request

reception unit a copy request for a date-and-time managed by said device as the date-and-time setting request.

4. (previously amended) The apparatus according to claim 3, wherein said date-and-time setting request unit comprises a date-and-time copy data generation unit for generating data for a copy of the date-and-time using non-reproducible information received from the date-and-time setting request reception unit which accepted the date-and-time setting request and the date-and-time managed by said date-and-time management device that issued the date-and-time request.

5. (previously amended) The apparatus according to claim 4, wherein said date-and-time copy data generation unit encrypts the non-reproducible information and information about the managed date-and-time, and generates data for copy of the date-and-time.

6. (previously amended) The apparatus according to claim 4, wherein said date-and-time copy data generation unit generates a signature from a result of encrypting the non-reproducible information and the information about the managed date-and-time, and generates data for copy of a date-and-time by combining the non-reproducible information, the managed date-and-time, and the signature.

7. (previously amended) The apparatus according to claim 3, further comprising a further date-and-time management device of a deliverer having a date-and-time setting unit for setting a date-and-time for said date-and-time management device for each date-and-time manager when said date-and-time management device for each date-and-time manager is delivered.

8. (original) The apparatus according to claim 1, further comprising a nonvolatile storage unit storing correction information for improving precision of said clock unit.

9. (currently amended) The apparatus according to claim 8, further comprising a correction information resetting unit for resetting the correction information stored in said nonvolatile storage unit in said clock unit when said clock unit becomes short of power, power is applied again to said unit, and said date-and-time setting request reception unit accepts a date-and-time setting request.

10. (original) The apparatus according to claim 8, wherein a secondary battery is provided as a power source of said clock unit.

11. (previously amended) The apparatus according to claim 2,
further comprising a date-and-time management device for each date-and-time manager,
and

wherein said date-and-time management device for each date-and-time manager comprises a date-and-time setting request unit for issuing to said date-and-time setting request reception unit a copy request for a date-and-time managed by said device as the date-and-time setting request.

12. (previously amended) The apparatus according to claim 11, wherein said date-and-time setting request unit comprises a date-and-time copy data generation unit for generating data for a copy of the date-and-time using non-reproducible information received from the date-and-time setting request reception unit which accepted the date-and-time setting request and the date-and-time managed by said date-and-time management device that issued the date-and-time request..

13. (previously amended) The apparatus according to claim 12, wherein said date-and-time copy data generation unit encrypts the non-reproducible information and the information about the managed date-and-time, and generates data for copy of the date-and-time.

14. (previously amended) The apparatus according to claim 12, wherein said date-and-time copy data generation unit generates a signature from a result of encrypting the non-reproducible information and the information about the managed date-and-time, and generates data for copy of a date-and-time by combining the non-reproducible information, the managed date-and-time, and the signature.

15. (previously amended) The apparatus according to claim 11, further comprising a further date-and-time management device of a deliverer having a date-and-time setting unit for setting a date-and-time for said date-and-time management device for each date-and-time manager when said date-and-time management device for each date-and-time manager is delivered.

16. (original) The apparatus according to claim 2, further comprising a nonvolatile storage unit storing correction information for improving precision of said clock unit.

17. (original) The apparatus according to claim 16, further comprising a correction information resetting unit for resetting the correction information stored in said nonvolatile storage unit in said clock unit when said clock unit becomes short of power, power is applied again to said unit, and said date-and-time setting request reception unit accept a date-and-time setting request.

18. (original) The apparatus according to claim 16, wherein a secondary battery is provided as a power source of said clock unit.

19. (currently amended) A signature generation apparatus embedded with a date-and-time management function capable of inputting a date-and-time setting request from each of a plurality of date-and-time managers, comprising:

a date-and-time setting request reception unit accepting a date-and-time setting request from any date-and-time manager before accepting a date-and-time setting request from a predetermined date-and-time manager, and accepting a date-and-time setting request only from the predetermined date-and-time manager after accepting a date-and-time setting request from the predetermined date-and-time manager;

a clock unit functioning in response to the accepted date-and-time setting request setting date and time in accordance with the date-and-time setting request most recently accepted by said date-and-time setting request reception unit and indicating official valid date-and-time information or date-and-time information with validity which complies with official valid date-and-time information after the date and time of said clock unit is set in accordance with the date-and-time setting request from the predetermined date-and-time manager; and

a signature generation unit generating a signature for input data to be signed according to information about a date-and-time indicated by said clock unit.

20. (currently amended) A signature generation apparatus embedded with a date-and-time management function capable of inputting a date-and-time setting request from each of a plurality of date-and-time managers in a hierarchical structure, comprising:

a date-and-time setting request reception unit accepting a date-and-time setting request from any date-and-time manager before accepting a date-and-time setting request from a

predetermined date-and-time manager, and accepting a date-and-time setting request only from the predetermined date-and-time manager after accepting a date-and-time setting request from the predetermined date-and-time manager;

a clock unit functioning in response to the accepted date-and-time setting request setting date and time in accordance with the date-and-time setting request most recently accepted by said date-and-time setting request reception unit and indicating official valid date-and-time information or date-and-time information with validity which complies with official valid date-and-time information after the date and time of said clock unit is set in accordance with the date-and-time setting request from the predetermined date-and-time manager; and

a signature generation unit generating a signature for input data to be signed according to information about a date-and-time indicated by said clock unit.

21. (original) The apparatus according to claim 19, further comprising a signature stop unit stopping said signature generation unit generating a signature when an operation stop of said clock unit is detected.

22. (previously amended) The apparatus according to claim 21, further comprising a function execution unit executing a clock-started function, different than generating the signature, when the operation stop of said clock unit is detected.

23. (original) The apparatus according to claim 19,
further comprising a date-and-time setter information storage unit storing information about a date-and-time manager as a date-and-time setter who has issued a date-and-time setting request last accepted by said date-and-time setting request reception unit,
wherein said signature generation unit generates a signature according to the information about the date-and-time setter in addition to the date-and-time information.

24. (original) The apparatus according to claim 19,
further comprising a date-and-time setting frequency information storage unit storing a number of date-and-time setting requests ever accepted by said date-and-time setting request reception unit,
wherein said signature generation unit generates a signature according to the information about the date-and-time setting frequency information in addition to the date-and-time information.

25. (original) The apparatus according to claim 20, further comprising a signature stop unit stopping said signature generation unit generating a signature when an operation stop of said clock unit is detected.

26. (previously amended) The apparatus according to claim 25, further comprising a function execution unit executing a clock-started function, different than generating the signature, when the operation stop of said clock unit is detected.

27. (original) The apparatus according to claim 20,
further comprising a date-and-time setter information storage unit storing information about a date-and-time manager as a date-and-time setter who has issued a date-and-time setting request last accepted by said date-and-time setting request reception unit,
wherein said signature generation unit generates a signature according to the information about the date-and-time setter in addition to the date-and-time information.

28. (original) The apparatus according to claim 20,
further comprising a date-and-time setting frequency information storage unit storing a number of date-and-time setting requests ever accepted by said date-and-time setting request reception unit,
wherein said signature generation unit generates a signature according to the information about the date-and-time setting frequency information in addition to the date-and-time information.

Claims 29-42 (cancelled)

43. (currently amended) A date and time management system, comprising:
management devices, each including a setting request unit issuing a setting request for date and time; and
user devices, each including
a reception unit accepting an initial setting request from any management device before accepting a prioritized setting request from a specified management device, and accepting subsequent setting requests only from the specified management device after accepting the prioritized setting request from the specified management device; and

a clock unit setting the date and the time in response to each setting request accepted by said reception unit and indicating official valid date-and-time information or date-and-time information with validity which complies with official valid date-and-time information after the date and time of said clock unit is set by the setting request from the specified management device.

44. (previously presented) A date and time management system as recited in claim 43, wherein the specific management device is operated by a predetermined manager.